Work Orde Tuesday, June 08					•			 				• •	<u> </u>	Page 1
Revision ID:	D135-751-01 Skidtube Insta			•	. :	Accept					Setup	Start Stop		
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W/O:			WC	ORK ORDER CH	ANGES					-
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Work Order ID 59583

Tuesday, June 08, 2010 11:31:13 AM



Page 2

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Item ID: Revision ID: Item Name:	D135-751-0 Skidtube Inst			Accept				S	•	Start Stop		
Start Date: Required Date Reference:	6/8/2010 : 6/17/2010	Start Qty: 1.00 Req'd Qty: 1.00	 		Cust Item Customer							
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Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp
120 CNC Bend 1		BENDING MACHINE -	SKIDTUBES	0.00			:	· · · · · · · · · · · · · · · · · · ·		 		1
CNC Delta 100 Ber	ıder	Memo 1- Bend tube	e as per program on CNC		Use 5/16"	1)	,			1	_	

1- Bend tube as per program on CNC Bender and Dwg D3507. Use 5/16" locator pin on buggy "A".2- Cut FWD END of tube as per dwg D3507

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Work Order ID 59583

Tuesday, June 08, 2010 11:31:13 AM



Page 3

Item ID:

D135-751-011

Accept

Setup Start



Revision ID:

Item Name:

Skidtube Installation

Start Date:

6/8/2010

Start Qty: 1.00

Required Date: 6/17/2010

Req'd Qty: 1.00

Cust Item ID:

Customer:

Tool ID

Start

Stop



Reference:

Approvals:

Process Plan: _____ Date: ____

Tooling:

SPC (Y/N):

Date: Date:

Stop

Sequence ID/ **Work Center ID**

130



Skidtubes Skidtubes

Description

Operation

Set Up/ **Run Hours**

0.00

Tool # Plan Code

Accept Qty

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Run

Reject Number

Insp. Stamp

Skidtubes

Memo

0.00

1-Cut Aft end as per dwg D3507

2-Deburr ends

3-Drill Aft & Fwd Cap holes using DT8678 & DT8901

Date: _____

4-Locate DT8870 & Drill Ground wire hole on top of Tube.

6-Locate DT8870 with #30 cleco in Ground wire hole ,then Pilot Drill all X-Bolt holes using #30" drill ****DO NOT OPEN AFT CAP HOLES*****

7-Open crossbolt holes to 0.125" (3 per side). Drill pilot holes for wearplates using Dt8868,Use DT8892 FOR REAR WEARPLATE HOLES. --

8-Open six rear wearplate holes using DT8892.Open holes to 0.297"

9- Drill holes section G-G (DT9431)

10-Open Aft & Fwd Cap holes using .208" drill.

11-Bore out aft end of tube as per Dwg D3507 & Detail "B".

12-Open ground wire hole .297" section E-E

13- Section G-G holes must be laid out manually, open to #30.

14-Deburr holes.

10-6-14

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W/O:			WC	ORK ORDER CHANG	GES				``
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Work Order ID 59583

Quality Control



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150 HandFinish Hand Finishing		Chemical Conversion Co	oat per QSI005 4.1	0.00			-		M	19/2	6/15	
160 		QC3- Inspect Part Finish	1	0.00					10	- (6-1	\$

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Work Order ID 59583

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Sequence ID/ Work Center II 170 Skidtubes Skidtubes) 1	and Detail "J 2-Counter S 3-Deburr an 4-Bond web A/R 241 S 5-Weld x-be A/R AL F 6-Grind wel	ink X-BOLT holes and blow out chips from the as per Dwg D3507 gike Flex Batch: Exp Date but (D3504-1/-3)space ROD Batch: ds flush t Holes as per Dwg	om inside of tube.	start ti	M 10/8 Me: 8:	1:00	4	Reje Qty	7	Reject Number	Insp. Stamp

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210 HandFinish		Pressure Wash per QSI00	5 4.3	0.00			¥L_	0	
Hand Finishing			ibe as per QSI 005 sectio	n 4.1.2.1 do not acid etch	10	lo6/28	· · · · · · · · · · · · · · · · · · ·		
220		White Gloss(Ref:4.3.5.1)		0.00					
Powder Coating		Memo START TIM OVEN TEM	e:/0:30 perature:_330 e://:00_	0.00 9			1 Bl	10-	6-29,
230		QC3- Inspect Part Finish		0.00	١				
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Dart Aerospace Ltd W/O: **WORK ORDER CHANGES Approval Approval** DATE STEP PROCEDURE CHANGE Bv Date Qtv Chief Eng / Prod Mgr QC Inspector Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ____ Date: _____ Resolution: _____ Disposition: ____ QA: N/C Closed: ___ Date: WORK ORDER NON-CONFORMANCE (NCR) NCR: **Corrective Action** Section B Description of NC Verification | Approval | Approval DATE STEP Action Description Initial

Section A	Chief Eng	Chief Eng	Date	Section	С	Chief Eng	QC Inspector
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240 HandFinish		HandFinishing		0.00			;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	ml		<u></u>	06	30
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Inspect Inserts

QC5- Inspect part completeness to step on W/O

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Work Order ID 59583



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	QC:		Date:	SPC (Y/N):	Da	ite:			ļ	Stop		
Sequence ID/ Work Center II 260 HandFinish Hand Finishing		2-Install Fw A/R 241 3-Install We Note:Instal Do r A/R 241 4-Install Plu Batch:	Sika Flex Batch:Exp Date earplates as per Dwg I all (1) Bolt and (1) was not Install Scews whe Sika Flex Batch:Exp Date	in the policy of		Tool #	Plan Code	Accept Qty	Rejec Qty	N	Reject Tumber	Insp. Stamp
270 QC Quality Control		QC5- Inspect part compl	leteness to step on W/6	0.00 Edd	57lo(Q	!			

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DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Action Descri	Section B ption	Sign &	Verifica Section		Approval Chief Eng	Approva QC Inspecto

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Item ID: Revision ID: Item Name: Start Date: Required Date: Reference:	D135-751-0 Skidtube Insta 6/8/2010 6/17/2010			Accept	Cust Item ID: Customer:		Setu	p Start Stop	
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290 QC Quality Control		QC4- 100% Inspect kits i	for completeness	0.00	(0)		-40-	-	· · · · · · · · · · · · · · · · · · ·
300 Packaging Packaging		Packaging Memo Identify and Location: PPP Rev:	pack for shipping as per P	0.00 0.00 PP D135-751-011			<u>/o-</u>	7 -1-	

Dart Aerospace Ltd W/O: **WORK ORDER CHANGES** Approval **Approval** DATE STEP PROCEDURE CHANGE Bv Date Qtv Chief Eng / QC Inspector Prod Mar Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ____ Date: _____ Resolution: _____ Disposition: ____ QA: N/C Closed: ____ Date: _____ **WORK ORDER NON-CONFORMANCE (NCR)** NCR: **Corrective Action** Section B **Description of NC** Verification DATE **STEP** Approval Approval Initial **Action Description** Sign & Section A Section C Chief Ena QC Inspector Chief Eng Chief Eng Date

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Work Ord Tuesday, June (Page 11
Item ID: Revision ID:	D135-751-0	11		Accept				Set	up S	Start		
Item Name:	Skidtube Insta	allation					1		5	Stop		
Start Date: Required Date: Reference:	6/8/2010 : 6/17/2010	Start Qty: 1.00 Req'd Qty: 1.00			Cust Ite Custom							
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310		QC21- Final Inspection	Work Order Release	0.00						101	/27/	1 A
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Dart Aerospace Ltd W/O: **WORK ORDER CHANGES** Approval Chief Eng / DATE **Approval** STEP PROCEDURE CHANGE Bv Date Qty QC Inspector Prod Mar Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ____ Date: _____ Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: **WORK ORDER NON-CONFORMANCE (NCR)** NCR: **Corrective Action** Section B **Description of NC** Verification DATE **STEP** Approval **Approval** Initial **Action Description** Sign & Section A Section C QC Inspector Chief Ena Chief Eng Chief Eng Date

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Picklist Print Tuesday, June 08, 2010 11:31:18 AM	,			Page 1
Work Order ID: 59583				a
Parent Item: D135-751-011				
Parent Item Name: Skidtube Installation		 	Start Date: 6/8/2010	Required Date: 6/17/2010
Comments: IPP Rev:A□06-06-21□New Issue□ IPP Rev:B 06-12-18 As per Rev IPP Rev:C 07-12-11 ECN 1036 IPP Rev D 08.11.04 Added DT		DD	Start Qty: 1.00	Required Qty: 1 00
D2962-150 Manufactured 3.540 Outer Tube, Extrut	No	110 Each	31.0000 1 1	
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D3504-1 Manufactured Crossbolt Spacer	No C	170 Each	22.0000 2 2	:
·	<u>Location</u> LG 31234 53742	22 2	Loc Code	2 BE 10/06/21
D3504-3 Manufactured Crossbolt Spacer		20 170 Each	32.0000 1 1	,
	<u>Location</u> LG 31232	<u>Loc Oty</u> 32	Loc Code	AE 10/06/21
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Tuesday, June 08, 2010 11:31:18 AM				Page 2
Work Order ID: 59583				
Parent Item: D135-751-011			! !!	
Parent Item Name: Skidtube Installation	3 14851118 1881 11888 11581 BISH 11881F 18881 BIHBF 1181	11801 30 13 1 00 1 00 	Start Date: 6/8/2010	Required Date: 6/17/2010
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D3505-1 Manufactured	No	170 Each	0.0000 1 1	
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D3506-1 Manufactured	No	190 Each	78.0000 4:1 4	·-:
Doubler				
	<u>Location</u>	Loc Oty	Loc Code	
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D3506-3 Manufactured	No	190 Each	70.0000 2 2	06 1906/21
Doubler		1	3	
	Location	Loc Qty	Loc Code	
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Work Order ID: 59583 Parent Item: D135-751-011 Parent Item Name: Skidtube Installation Required Date: 6/17/2010 **Start Date:** 6/8/2010 Comments: IPP Rev:A□06-06-21□New Issue□ JLM Start Qty: 1.00 Required Qty: 1.00 IPP Rev:B 06-12-18 As per Rev B JLM IPP Rev:C 07-12-11 ECN 1036 as per revB DD Added DT9431 to sequence 5 EC vcerified DD IPP Rev D 08.11.04 4 ALS7-1032-130 Purchased No 240 Each 17.0000 38 Insert B# 114723 Location Loc Qty Loc Code ST282 17 113238 17 ALS4-1032-225 Purchased No 260 Each 6,948.000 Insert Location Loc Qty Loc Code PK011 6948 6948 110768 AN3C4A Purchased No Each 260 1,525,000 31 31 **BOLT** Location Loc Oty Loc Code ST350 1525 114103 501 114108 14 114416 12 114523 2 114859 996

Part No:		PAR #:	Fault Category:	NCR: Yes No	DQA:	Date:
	Resolution:		Disposition:	QA: N/C Closed	l:	Date:

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DATE	STEP	Section A	Initial Action Description Sign & Chief Eng Chief Eng Date			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Tuesday, June 08, 2010 11:31:18 AM

Work Order ID: 59583 Parent Item: D135-751-011 Parent Item Name: Skidtube Installation **Start Date:** 6/8/2010 **Required Date:** 6/17/2010 IPP Rev:A□06-06-21□New Issue□ JLM Start Qty: 1.00 Required Qty: 1.00 Comments: As per Rev B JLM IPP Rev:B 06-12-18 IPP Rev:C 07-12-11 ECN 1036 as per revB DD Added DT9431 to sequence 5 EC vcerified DD IPP Rev D 08.11.04 D2965 No 49.0000 Manufactured 260 Each? Cap, 105 Skidtube M/ 10.06.30 Location Loc Oty Loc Code FP4 49 49 52057 D2965-3 Each! Manufactured 260 9.0000 Cap Location Loc Qty Loc Code FP 50560 3 52282 6 D3492-041 Manufactured 260 Each 70.0000 Plug Assembly M/ 10.06.30 Location Loc Qty Loc Code FP013 70 57915 6 58180 60 59189

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 -	Section A	Chief Eng	Chief Eng	Date	Section		Chief Eng	QC Inspector
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Parent Item: D135-751-011							
Parent Item Name: Skidtube Inst		01113 1881 11888 11181 8111 118811 1 8881 81181 1181	#11 #0161 #21 81 #1 :	Start Date:	6/8/2010	Required Date: 6	/17/2010
Comments: IPP Rev:A □ Comments: IPP Rev:B IPP Rev:C IPP Rev D	07-12-11 ECN 1036 as pe	r revB DD	DD	Start Qty:	1.00	Required Qty: 1	.00
D3492-043	Manufactured No		260 Each	33.0000 4	4		
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		Location	Loc Qty	Loc Code		m/ 10	-06-30
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		57916	27	왕 영 -			
D3492-047	Manager Land	59190	4 260 Each	41,0000		_	
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Plug Assembly		<u>Location</u> FP	Loc Oty 41	Loc Code		MM 10	06-30
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D3508-1	Manufactured No.		260 Each	6.0000	1		
Wearplate		Location	Loc Qty	Loc Code		m 10.	<i>06</i> ·30
		FP	6			_ / // / / / / /	00 30
		51261	6				
D3508-3	Manufactured No	•	260 Each	7.0000	1		
Wearplate		Location	Loc Qty	Loc Code		all in	06-30
		FP21	7	<u> </u>		10	00 30
		51386	1			— —	
		55339	6			_	
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Dart Aerospace Ltd W/O: **WORK ORDER CHANGES Approval** DATE STEP **Approval** PROCEDURE CHANGE By Date Qtv Chief Eng / QC Inspector Prod Mgr Part No: ______ PAR #: ____ Fault Category: _____ NCR: Yes No DQA: ____ Date: ____ Resolution: _____ Disposition: _____ QA: N/C Closed: ____ Date: ____ WORK ORDER NON-CONFORMANCE (NCR) NCR: **Corrective Action** Section B **Description of NC** Verification DATE **Approval STEP Approval** Initial **Action Description** Sign & Section A Section C Chief Eng QC Inspector Chief Eng Date Chief Eng

Work Order ID:	59583						ļ.		
Parent Item:	D135-751-011						ų.		
Parent Item Name:	Skidtube In:	stallation				:	Start Date:	6/8/2010	Required Date: 6/17/2010
Comments:	IPP Rev:AC IPP Rev:B IPP Rev:C IPP Rev D	07-12-11 ECN 1036 a	JLM is per revI	B DD ence 5 EC vcerifie	d DD	1	Start Qty:	1.00	Required Qty: 1.00
D3508-5		Manufactured	No		260 E	6.0000	1 	1	<u> </u>
Wear place				Location FP21 51388	<u>Loc Qty</u> 6 6		<u>e</u>		MI 10.06-30
D3508-7		Manufactured	No		260 E	ach 4.0000		1	
Wearplate				<u>Location</u> FP21	Loc Oty	Loc Cod	<u>e</u>		M 10.06-30
D3558-1		Manufactured	No	51389	260 E	ach 17.0000		1	
Gasket				<u>Location</u> FP	Loc Oty		<u>e</u>		M 10.06-30
D3558-3		Manufactured	No	50925	17 260 E	Each 18.000	1	1	
Gasket				<u>Location</u> FP	<u>Loc Oty</u> 18	<u>Loc Coo</u>	<u>le</u>		M 10.06.30

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D3558-5	Manufactured	No		260	Each	7.0000		1		
D3558-7	Manufactured	Location FP No	<u>50926</u>	<u>Loc Qt</u> 260	Y 7 7 Each	Loc Code 13.0000		1	_ M _	10-06-30
NAS1611-007	Purchased	<u>Locatio</u> FP No	43245 50927	<u>Loc Qt</u>	13 5 8 Each	Loc Code 444.0000	2		_ m/	10.06.30
O-RING NAS1611-010	Purchased	<u>Locatio</u> FP No	on 103697		<u>Y</u> 44 44 Each	Loc Code 302.0000	4	4	m	10.06-30
O-RING	i dionascu	<u>Locati</u> FP	on 110715 110915	<u>Loc Qt</u> 3 1		<u>Loc Code</u>				10 -06 -30
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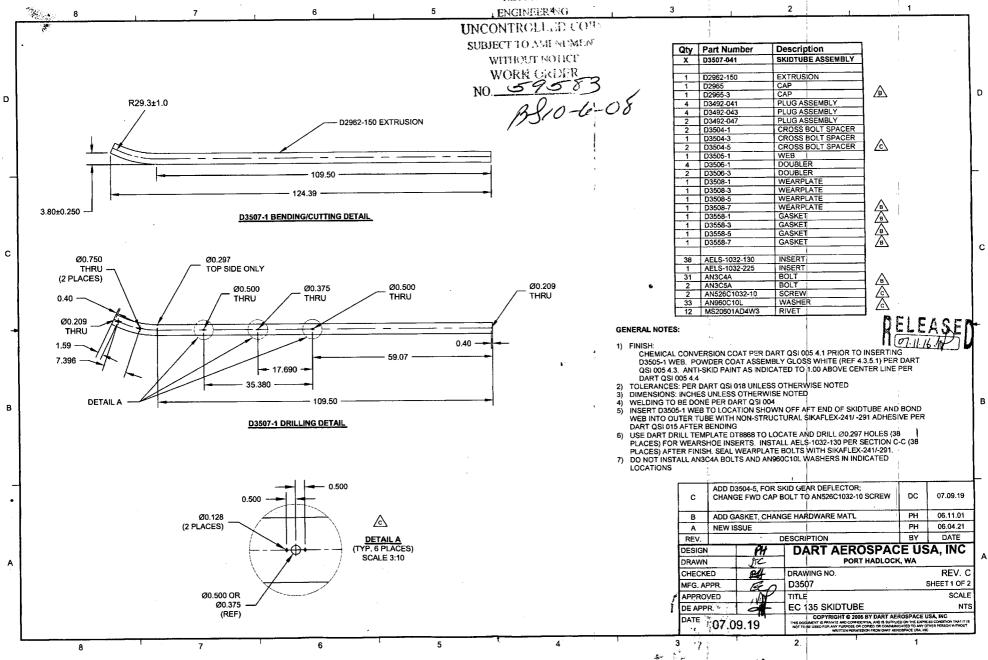
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Parent Item Name:	Skidtube Installation								art Date:		=	Date: 6/17/2010
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washer D3512-1		Manufactured	No			280	Each	13.0000	2	2		\mathcal{O}
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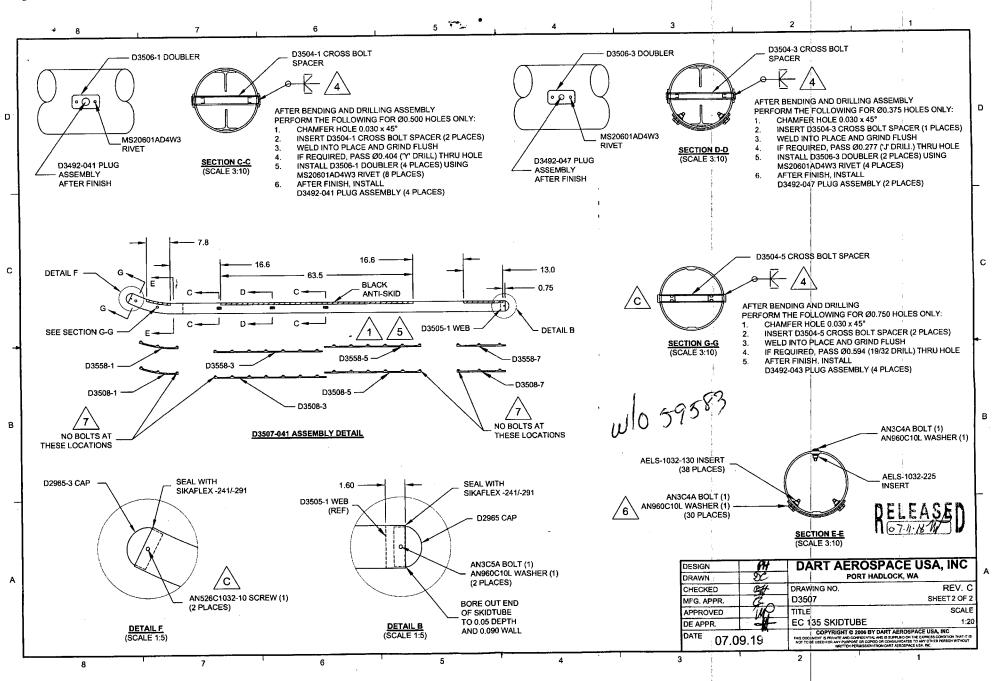
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AWS D17.1.2001 QUALIFICATION TEST RECORD

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Job number: 505370	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Part number: D135 751	OIL
Description: Skid tube	
Welding Process: Tig Mi	g]
Base materiel: Aluminia	
Current: AC[DC[]	
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TEST	REQUIREMENTS AND RESULTS
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UNACCEPTABLE	
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Cracks:	pass['] fail[]
Undercut:	Lange 1
Pin holes:	pass[] fail[]
Overlap (cold lap)	pass[] fail[]
Porosity (surface):	pass[// fail[]
Coloration:	pass[] fail[]
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The above named individual is	qualified in accordance with AWS D17.1.2001 to weld